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UNIVERSITY OF CENTRAL FLORIDA

1985
Self Study

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS

INSTITUTE FOR SIMULATION AND TRAINING

SELF STUDY REPORT

UCF INSTITUTE FOR SIMULATION AND TRAINING

Established December 1982

1. Philosophy

1.1 Role in the University and the Community

The UCF Institute for Simulation and Training (IST) is an interdisciplinary organization located on the UCF campus in Orlando, Florida. The IST draws on faculty expertise and the academic resources of UCF, the Naval Training Equipment Center (NTEC), and the Army Project Manager for Training Devices (PM Trade), and a wide variety of academic and industrial affiliates in the simulation and training fields.

The development of basic research programs in areas of simulation and simulation training devices represents the primary function of the Institute. The focus is not only to present the state of the art, but to indicate directions in which simulation training can be expected to proceed during the next decade.

1.2 Evaluation and Projections

Training of undergraduate and graduate students in areas of simulation and simulation training is an important by-product of the institute research program. These students will become the research engineers and scientists of the future and their training will lead to the development of an experienced manpower pool in these areas.

Special topics and academic credit courses are continuously being developed and improved for personnel at NTEC, PM Trade, and other governmental and industrial participants.

There is a compelling need for such service, as there is no other formal organized research and development agency in existence which treats the question of simulation as a component of modern high technological training programs. Institute interests over the next decade will need to be continually monitored and revised to reflect changing interests in the training community. Without question, the most significant developments are related to the increasing levels of technology being applied to the training field. Such developments include the continuing development of microcomputer technology, and the increasing availability of such equipment as videodisc and graphics display hardware. As the Military Services and associated High-Tech industry in Central Florida continue to develop sophisticated training programs using these new technologies, the Institute will need to be responsive to this continuing evolutionary process.

2. Organization

2.1 Duties and Staffing

An advisory board composed of representation from UCF, government agencies, and industries, under the auspices of the National Security and Industrial Association (NSIA), provides input and advice consistent with the goals of the Institute. This board is responsible for recommending guidelines and policies relative to the research and instructional functions of the Institute. An executive committee of the advisory board interacts routinely with the Institute Director.

The Institute Director coordinates the research programs and the activities of the Institute, oversees student training programs, and develops curricula for University and external courses offered by the Institute. The Director's duties also include the day to day administration of the IST program. The Director of the Institute reports to the UCF Vice President for Research. Funding for the Institute comes from the federal government, State of Florida, and private sources.

At present, Institute staffing is comprised of a full-time director (national search underway during Fall of 1984), and a full-time secretary. As Institute programs develop, additional staff will be necessary to support its activities. The criteria for hiring are spelled out in the accompanying document used in the aforementioned search which is being conducted during the fall of 1984. These criteria were developed in consultation with the Institute Director and the advisory board to reflect common interest in the research area. Planning and allocations are adequate for Institute purposes.

2.2 Projections

The Institutes planning procedures are a function of the advisory board and executive committee overseeing the activities of the Institute. Primary input for the direction of the Institutes research thrusts come from the Industrial Advisory Board and their information is gained from the industry experience in the training area. It is anticipated that no significant organizational changes will be needed to manage Institute activities and growth during the coming decade, with the exception of additional staff people reporting to the Institute Director to manage various aspects of the Institutes development.

3. Financial Resources

3.1 Funding

Institute funding at present is provided by the Office of Graduate Studies and Research at the University of Central Florida. This funding is currently budgeted at an amount equal to 75 thousand dollars per academic year. Controls and reporting requirements are those required by state law for university operation, and are consistent with other reporting activities of the Office of Research. Budgets are prepared by the Institute Director and are supervised by the Director of Sponsored Research at the University and the Vice President for Graduate Studies and Research. At present, all funds are generated by overhead activities of the University Research office. It is anticipated that future funding will come from overhead generated on research projects sponsored by the Institute. Funds are adequate at present to support Institute operations.

3.2 Equipment

The Institute has a basic complement of office equipment acquired through Graduate Studies OCO funding. At present this equipment consists of minimal office furniture, an Apple computer, and dictation and typing equipment. Expense funds are available to support Institute operating expenses, and may be used for travel, communications, copying, and the like. Purchases made by the Institute are fully utilized after purchase.

4 Personnel

4.1 Recruitment, Selection, and Salaries

New personnel are recruited in conformance with University rules. The University of Central Florida is an equal opportunity, affirmative action employer, and all personnel selection is made with regard to University policies in these areas. As the Institute was formed recently in December of 1982, no history of salary information is available or appropriate. Recommendations of the Advisory Board and executive committees concerning salaries of Institute administrators will be used to insure such salaries are consistent with University and Institute mission requirements. At present, the salary levels for the Institute director are a function of University salary policies associated with its faculty. With the use of external funding, there will be additional flexibility in the future of the Institute operations to support salary increases not available to all state employees.

4.2 Security, Working Conditions and Projects

With the two person staff now operating the Institute, promotion policies related to performance of Institute duties have not yet been developed. The criteria used to evaluate personnel and the associated waitings will need the attention of the board of advisors in the future. Clearly, promotional opportunities will depend upon the availability of external research funding, and the merit pay process will be a of the success of the director and his or her staff in acquiring external funding.

However, office equipment and space for the Institute are adequate at present. As Institute activities develop and staff increase additional space will be required on a near term basis. There have been no constraints on Institute operations due to equipment and supply limitations. Future personnel needs cannot be adequately addressed at this time, as Institute staff acquisition will depend on the nature of research projects undertaken. As these projects develop, available personnel will be recruited to fill appropriate positions.

5. Physical Facilities

5.1 Office space for Institute operations is currently provided in the Office of Graduate Studies and Research in the Administration building at UCF. That space is adequate for the present mission. It is virtually impossible to identify future space needs for the Institute without a determination of the amount of research that will be in force as the Institute develops. Special purpose facilities for the Institute through the years might include inclusions for office space in the new University of Central Florida Research Park just adjacent to the main campus. This park is projected to house all the major clients of the Institute activities: the Naval Training Equipment Center and the US Army Project Manager for Training Devices. The proximal location of the Institute to these organizations would materially facilitate its operations. In addition, the Research Park is projected to be available for the location of Corporate activities in a variety of high Technology areas, including Simulation and Training. These organizations would be appropriate for closer contact with Institute activities.

5.2 Provisions

Institute Development and planning activities have already been discussed above. Institute provisions for parking, loading, handicap access, handling hazardous materials and safety are all consistent with University of Central Florida policies already in existence. No special safety hazards are anticipated with respect to Institute operations and thus, no recommendations to alleviate any particular safety will be proscribed.

6. Computers

6.1 Impact and Needs

Much of the Institute activities are centered around the application of modern digital computing technology. Thus, computers may be said to have a major impact on the operations of the Institute. Major clients of the Institute, NTEC and PM TRADE are large consumers of computer based training systems, where a digital computer is used to operate simulated military equipment to provide a training function. The Institute must therefore in its activities have exposure to such computers for its research staff and educational programs. The University of Central Florida Computer Center provides one such capability with a large IBM 4341 computer servicing a variety of computer terminals located throughout the main campus. In addition, the Institute was granted a gift of a computer system by the Gould Computer company in the summer of 1984. This system, a Gould Model 32/6750 computer, is located in the college of Engineering on the University of Central Florida main campus, and is available for research and educational applications involving Institute activities. The impact of

this grant on the Institute's research base is substantial. The total value of hardware and software and training services provided with this grant was in excess of \$330,000.

Administrative need for computers in the Institute is at present adequately served by the computers in the office of Graduate Studies and Research used for word processing and administrative functions. The Director and Institute staff will need personal computers to support such functions as spread sheets and data base processing as the Institute grows.

The Institute will need to develop laboratories, possibly in conjunction with existing UCF academic departments, to support advanced research in simulation and training areas if it is to carry out its intended mission. It is anticipated this equipment will be acquired through grant awards from external support or external industries and organizations, and partially from University Capital Equipments funds made available for this pupose.



DIRECTOR
Institute for Simulation and Training
University of Central Florida

The Institute is an interdisciplinary organization dedicated to the accomplishment of basic and applied research. The Director is responsible for the administration and operation of Institute research programs, the development of external funding, and liaison with researchers and leaders in government, military, and industrial organizations.

The successful applicant will have strong organizational and communications skills. A Ph.D. is preferred in Engineering, Computer Science, Physics, Mathematics, Human Factors, Psychology, or other related field. A minimum of 10 years full time experience in a university research institute, government laboratory or research oriented company and teaching experience is preferred. Experience as a project director, principal investigator, or program manager and demonstrated success in obtaining contracts or grants is required. The salary is commensurate with qualifications and experience.

Apply to: Dr. Louis M. Trefonas, Vice President for Research, University of Central Florida, Orlando, Florida, 32816. Applications must be received by August 31, 1984.

UCF is an Equal Opportunity/Affirmative Action Employer.